

REMARKS

Favorable reconsideration of the present application is respectfully requested. Claims 1-8, 17, 18 and 21-24 are currently pending in the application. Claim 1 has been amended, Claim 24 has been added to claim additional subject matter to which Applicants are entitled, and Claims 9-16, 19 and 20 have previously been withdrawn from consideration. Support for new Claim 24 can be found in Claims 1, 6, 18, 21 and 23, and paragraphs [0008] and [0012] of Applicants' disclosure.

Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Without acceding to the rejection, Claim 21 now recites, *inter alia*, a non-grinding, double screw kneader with two screws arranged in parallel next to each other and each screw having the same rotational direction such that the non-grinding, double screw kneader does not alter the length of the reinforcing fibers. Support is provided, for example, in paragraph [0008] of Applicants' disclosure and prior filed Claim 23. Therefore, Applicants believe that the rejection is moot and respectfully request that it be withdrawn.

Claims 1-8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1088645 (hereinafter EP '645) in view of Japanese Patent 51-66367 (hereinafter JP '367) further taken with U.S. Patent No. 4,353,763 to Simons ("Simons"). Without acceding to the rejection, Claim 1 recites, *inter alia*:

"the kneading means being a non-grinding, screw kneading aggregate, wherein the non-grinding, screw kneading aggregate is adapted to homogeneously mix the reinforcing fibers with the thermoplastic material, and supply the thermoplastic material mixed with the reinforcing fibers via the profile nozzle (4) wherein the fiber length of the reinforcing fibers of at least 2 mm is maintained."

Support is provided, for example, in paragraphs [0008] and [0012] of Applicants' disclosure and prior filed Claims 6, 18 and 23.

As admitted in the prior Office Action, the device disclosed EP '645 is an extruder and that kneading elements are not taught or suggested (see, 4/26/2010 Office Action, page 4, paragraph 6). Regarding JP '367, only an English language Abstract was provided and, as the Examiner admits, "... there is no mention of cutting or grinding of the fiber in the abstract of the reference which was provided." (See, Advisory Action dated 3/23/2011, Section 11.) Therefore, the Examiner is incorrect in asserting that the purpose of JP '367 "was to knead the fibers with the polymer and apply the same as a reinforcement to a pipe." (see, Id.)

Applicants have independently obtained partial translations of what appear to be the relevant portions of JP '367, specifically, Page 2, line 10, upper right column to line 1, lower right column; and Page 3, line 15, upper right column to Page 3, line 9, lower left column. A copy of the partial translation is provided herewith as part of a concurrently filed Information Disclosure Statement. Consistent with FIG. 1, lines 1-11 of the first paragraph of the translation states:

"First, a mold-releasing tape 3, such as a cellophane tape, continuously supplied from a certain location is moved in the direction of the metal core while being wound helically around the rotating metal core 1, and then glass fibers 4 that are continuously supplied and impregnated with a thermosetting resin, such as glass fibers impregnated with unsaturated polyester or glass fibers impregnated with an epoxy resin, are wound helically around a mold-releasing tape layer 3' to form an inner layer 4' that moves together with the mold-releasing tape layer 3'. 5 is a device for kneading and supplying resin mortar mentioned below, in which device a thermosetting resin and an aggregate such as quartz sand are kneaded while being degasified in a vacuum and a band 8 of the degasified resin mortar is extruded from an extrusion outlet 51." (Emphasis added by Applicants.)

In addition, lines 4-5 of the second paragraph of the translation states:

"in the rear cylinder, the resin is kneaded with quartz sand from the quartz sand inlet 19 and extruded into the vacuuming chamber 13." (Emphasis added by Applicants.)

Therefore, in addition to that stated in response to the previous rejection, which is incorporated herein by reference thereto, JP '367 is now believed to clearly not teach or suggest a non-grinding, screw kneading aggregate, as recited in Claim 1.

At best JP '367 may be said to teach or suggest a kneading device, but it does not teach or suggest that the kneading device is the non-grinding, screw kneading aggregate, as recited in Claim 1, since there is nothing in the Figures, Abstract or partial translation of JP '367 that teaches or suggests that the kneading device therein is a non-grinding, screw kneading aggregate. In fact, if anything, the Figures, Abstract and partial translation of JP '367 appear to clearly teach that the continuous fibers are never put into the kneading device, instead they are impregnated with an epoxy resin and wound directly around the mold releasing tape layer 3. Therefore, JP '367 would not provide the teaching or suggestion or motivation to one of skill in the art to assume that the kneading device therein is a non-grinding, screw kneading aggregate. Specifically, Figure 1A appears to show the rolling of the output kneaded plastic strip 7 with a separately supplied continuous, fiber strip 4 onto a mandrel 1. As a result, since the fibers are not shown being feed into the kneading device, it is not possible to determine whether the kneading device in JP '367 is a non-grinding one. In fact, given the design and apparent use that is disclosed in JP '367, it would not be reasonable for one of skill in the art to assume a non-grinding, screw kneading aggregate is in JP '367. Instead, it is more likely to assume that the screw kneading device in JP '367 is actually a grinding or blending device, since its main purpose appears to be to ensure that the plastic and aggregate mixture feed into the kneading device is homogeneously combined and mixed together.

Simons is also not understood to teach or suggest all of the above discussed features, nor does the Office Action rely on Simons for such teachings. Therefore,

Applicant respectfully submits that Claim 1 distinguishes patentably from EP '645, JP '367 and Simons.

The dependent claims are also believed to be patentable due at least to their dependence from Claim 1, as well as for the additional subject matter recited in the dependent claims.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth in paragraph 5 of the Office Action further taken with U.S. Patent No. 6,419,864 to Scheuring et al. ("Scheuring"). Without acceding to the rejection, Claim 21 recites, *inter alia*, a non-grinding, double screw kneader with two screws arranged in parallel next to each other and each screw having the same rotational direction such that the non-grinding, double screw kneader does not alter the length of the reinforcing fibers. It is apparent that the applied references do not teach or suggest these features.

In addition to Scheuring failing to make up for the deficiencies of EP '645, JP '367 and Simons in regards to the rejection of Claim 1, Scheuring also fails to teach or suggest a non-grinding, double screw kneader with two screws arranged in parallel next to each other and each screw having the same rotational direction such that the non-grinding, double screw kneader does not alter the length of the reinforcing fibers, as recited in Claim 21. Specifically, Scheuring is described as an extruder that cuts fiber rovings that are fed into the extruder (see, Abstract; Column 2, lines 6-8 and Column 4, lines 36-39) and is provided with kneading disks 28, 33 that operate upstream from the point at which the fiber rovings 12 are introduced into the fiber feed zone 34 where they are apparently cut to the desired length by screw elements 35 and then mixed by a pair of mixing elements 37 and 38 (see, FIGs. 2 and 3; and Column 4, lines 16-44). As a result,

the fibers introduced into the fiber feed zone 34 are never engaged by the kneaders 28 and 33.

Therefore, it is apparent that the combination of EP '645, JP '367, Simons and Scheuring does not teach or suggest a non-grinding, double screw kneader with two screws arranged in parallel next to each other and each screw having the same rotational direction such that the non-grinding, double screw kneader does not alter the length of the reinforcing fibers, as recited in Claim 21.

Therefore, Applicants respectfully submit that Claim 21 distinguishes patentably from EP '645, JP '367, Simons and Scheuring.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth in paragraph 5 of the Office Action further taken with U.S. Patent No. 4,466,854 to Hawerkamp ("Hawerkamp"). This rejection is respectfully traversed.

Hawerkamp is not understood to teach or suggest all of the above discussed features in relation to Claim 1, nor does the Office Action rely on Hawerkamp for such teachings. Therefore, it is apparent that the combination of EP '645, JP '367, Simons and Scheuring does not teach or suggest a non-grinding, screw kneading aggregate, as recited in Claim 22.

Therefore, Applicant respectfully submits that, for at least those reasons given above for Claim 1, Claim 22 distinguishes patentably from EP '645, JP '367, Simons and Hawerkamp.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth in paragraph 6 of the Office Action further taken with Hawerkamp.

Hawerkamp is not understood to teach or suggest all of the above discussed features in relation to Claims 1 and 21, nor does the Office Action rely on Hawerkamp for

such teachings. Therefore, it is apparent that the combination of EP '645, JP '367, Simons, Scheuring and Hawerkamp does not teach or suggest a non-grinding, double screw kneader, as recited in Claim 23.

Therefore, Applicant respectfully submits that, for at least those reasons given above for Claims 1 and 21, Claim 23 distinguishes patentably from EP '645, JP '367, Simons, Scheuring and Hawerkamp.

New Claim 24 recites, *inter alia*:

“that the plasticizing aggregate is a kneading means (3) supplying a thermoplastic plastic mixed with reinforcing fibers via the profile nozzle (4), the kneading means being a non-grinding, screw kneading aggregate being adapted to homogenously mix the reinforcing fibers with the thermoplastic material, and supply a mixture of the thermoplastic plastic material and the reinforcing fibers via the profile nozzle (4) with a fiber length of the reinforcing fibers of at least 2 mm being maintained.”

For at least those reasons given above for Claim 1, Applicants believe that new Claim 24, is also patentable and respectfully request that the Examiner formally allow the claim.

Accordingly, a Notice of Allowance for all of the currently pending claims is respectfully requested.

Should the Examiner believe that any further action is necessary to place this application in better form for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T4494-16116US01) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

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By: /David R. Schaffer/
David R. Schaffer
Reg. No. 43,089

Miles & Stockbridge, P.C.
1751 Pinnacle Drive
Suite 500
McLean, Virginia 22102-3833
(703) 903-9000